

REMARKS

No claims have been canceled, amended or added in this paper. Therefore, claims 1, 4-5 and 7-16 are pending and are under active consideration.

Claims 1, 4, 7, 10-12, 14 and 16 stand rejected under 35 U.S.C. 103(a) "as being unpatentable over Schollockopf (US Patent No. 4245583) in view of Higginson (US Patent No. 3132048)." In support of the rejection, the Patent Office states the following:

Regarding claim 1, Schollockopf describes a dosing device (doctor blade 5) arranged on an application roller (roller 2) with a sump (medium 1) provided between the dosing device (5) and application roller (2), and a dosing gap (adjustable opening 12) is provided between the dosing device (5) and the application roller (2) through which material (1) is supplied to the application roller (2) to apply the material (1) from the application roller (2) to one side of a substrate web (conveyor 3) (Schollockopf: column 2, lines 20-27, 42-44, and Fig. 1). The dosing device (5) of Schollockopf comprises only a first area, and does not comprise rotatably selectable areas having different dosing gaps. However, Higginson teaches the use of a rotatable doctor blade (adjustable doctor C) that forms a gap between the dosing device (C) and the application roller (cylinder B) and which comprises several areas (ribs c) that differ from one another and can be rotatably selected (Higginson: column 1, lines 61-66, column 2, lines 1-8, and Figs. 1-2). Higginson teaches that the use of such a rotatable dosing device (C) allows for control over the thickness of material delivered to the substrate (Higginson: column 1, lines 10-21). One of ordinary skill in the art at the time of the invention, motivated by a need to control the thickness of material passing through the dosing gap in the apparatus of Schollockopf, would therefore have found it prima facie obvious to replace the dosing device of Schollockopf with the rotatably adjustable dosing device of Higginson.

Regarding claim 4, the dosing device (adjustable doctor C) of Higginson comprises multiple areas (ribs c) provided as external surface areas (Higginson: column 1, lines 64-66, and Figs. 1-2).

Regarding claims 7 and 16, Higginson describes a mechanical control device (indexing means, crank c2, holes c4) which selects areas of the dosing device (adjustable doctor C) and controls the angle of the doctor blades (ribs C) (Higginson: column 1, lines 61-70).

Regarding claim 10, the external surface (ribs c) of the dosing device (adjustable doctor C) of Higginson is part of a roller wall section (C) (Higginson: Column 1, lines 61-66 and Fig. 2).

Regarding claim 11, the doctor blade of Higginson (adjustable doctor C) is adjustable through the use of a plurality of holes (holes c4) in order to set a dosing gap width (Higginson: column 1, lines 61-70 and Fig. 1).

Regarding claim 12, the doctor blade of Higginson (adjustable doctor C) is capable of being rotated such that the blades (ribs c) are directed at an angle greater or smaller than 90 with respect to the application roller (roller B) (Higginson: column 1, lines 66-70 and Fig. 2).

Regarding claim 14, the different areas (ribs c) of the dosing device (adjustable doctor C) of Higginson are even distributed over the circumference of the device (C) (Higginson: Fig. 2).

Applicants respectfully traverse the subject rejection.

Schollkopf et al. relates to a dosing device arranged with an application roller. The surface of the Schollkopf roller has a large number of etched cells provided in it. Further, there is provided a wetting container which has a doctor blade mounted by known means under the bottom drainward side of the container (see Schollkopf et al. at col. 2, lines 23-26). This container further comprises a pressure chamber 11 into which a viscous coating medium is pumped under pressure by known means. The pressure chamber is adjustably connected to the wetting container through an adjustable opening so that the viscous medium flows under pressure through the adjustable opening in the

direction of arrow 14, which according to Fig. 1 is counter to the direction of the roller. Beneath this opening, the doctor blade is positioned to remove the excess medium.

According to col. 2, lines 32-33 of Schollkopf et al., the doctor blade is adjustable. In addition, according to col. 2, lines 35-36 of Schollkopf et al., the doctor blade is pivotally and laterally adjustable by known means. Applicants respectfully submit that a person of ordinary skill in the art, starting with Schollkopf et al., would not have had the problem to look for another solution for adjusting, for example, the width of the medium that should remain on the application roller.

Furthermore, the doctor blade according to Schollkopf et al. is also a limiting part of the wetting container, as can be seen from Figs. 1 and 2 thereof. This means that the Schollkopf doctor blade also holds back the viscous medium in the wetting container.

Higginson relates to a device for pasting wallpaper with glue. The Higginson device includes a paste container into which a portion of a paste-applying roller is dipped. After the paste-applying roller has passed through the paste container, an adjustable doctor blade 10, which is positioned above the paste container without any contact with the stored glue, regulates the depth of paste on the roller. The excess paste is then forwarded back into the paste container, which is located beneath the adjustable doctor blade. This principle for adjusting the depth of paste on the applying roller is totally different from that of the present invention. There is not built any sump between the doctor blade and the applying roller. To the contrary, the doctor blade is positioned separate from the sump or the container storing the paste and only the applying roller passes through the paste container in a dipped manner. After that, the doctor blade only removes the excess paste from the applying roller.

Therefore, this is a totally different principle for applying paste onto the paste-applying roller and for removing it for a predetermined depth of paste on the applying roller.

Additionally, the principle for achieving the depth of the paste on the applying roller according to Higginson is different from that according to Schollkopf. Due to these types of differences in the manner of applying the paste for medium on the application roller, a person of ordinary skill in the art would not have considered eliminating one element of one approach to replace this by another element of the other approach. More specifically, this means that the doctor blade 10 of Higginson would not have been picked out and used instead of the doctor blade 5 of Schollkopf et al. This would not have been done because, according to Higginson, the paste is stored separate and beneath the doctor blade whereas, in Schollkopf et al., the doctor blade is positioned beneath and adjacent to the paste and next to the application roller. Furthermore, due to the fact that the doctor blade of Schollkopf et al. also limits the wetting container 4, this one would not have been replaced with a rotatable doctor blade with different long ribs of Higginson because there is not sufficient place remaining for such a replacement. This is apparent by having a look at Fig. 1 of Schollkopf et al., where there is also a partition wall 10, which has to be removed to give space to the doctor blade as shown in Fig. 2 of Higginson. Furthermore, the fluid pressure according to arrow 14 in Fig. 1 of Schollkopf et al. could not be maintained by replacing the doctor blade 5 of Schollkopf et al. with the doctor blade of Higginson.

A person of ordinary skill in the art only learned from Higginson to use such a doctor blade with different ribs in this manner that the application roller will be dipped into a paste container with

a portion of the roller and then, after having left the paste container, the doctor blade will be positioned above and separate from the paste container so that the excess paste can be removed and dropped back into the paste container. Due to the above, Applicants respectfully submit that the approach that the Patent Office has taken in combining the references is a view based on impermissible hindsight, said view being made possible only after having learned about the solution according to the present invention.

That the above is based impermissibly on hindsight is also apparent by taking into account the fact that Higginson issued in 1964. Nearly, twenty years later, the device of Schollokopf et al. issued, and it took another 22 years until the present invention was made.

Accordingly, for at least the above reasons, the subject rejection should be withdrawn.

Claim 5 stands rejected under 35 U.S.C. 103(a) “as being unpatentable over Schollokopf in view of Higginson as applied to claims 1, 4, 7, 10-12, 14, and 16 above, and further in view of Klenk (US Patent No. 2995180).” In support of the rejection, the Patent Office states the following:

Regarding claim 5, the application roller (roller 2, 15) of Schollokopf is optionally smooth or structured (Schollokopf: column 1, lines 20-30 and Figs. 1-2). The doctor blade (ribs c) and external surfaces areas (c) of Higginson are smooth (Higginson: Fig. 1). However, it is known in the art, as taught by Klenk, that a structured doctor blade (doctor blade 4) can be used to produce a pearled or creped substrate (Klenk: column 2, lines 27-36 and Figs. 2-4). One of ordinary skill in the art at the time of the invention, motivated by a need to produce pearled or creped paper, would therefore have found it prima facie obvious to make use of the structured doctor blade of Klenk in the apparatus of Schollokopf in view of Higginson.)

Applicants respectfully traverse the subject rejection. Claim 5 depends from claim 1. Claim 1 is patentable over Schollkopf et al. in view of Higginson for at least the reasons given above. Klenk fails to cure all of the deficiencies of Schollkopf et al. and Higginson with respect to claim 1. Therefore, based at least on its dependency from claim 1, claim 5 is patentable over the present combination of Schollkopf et al., Higginson and Klenk.

Accordingly, for at least the above reasons, the subject rejection should be withdrawn.

Claim 8 stands rejected under 35 U.S.C. 103(a) “as being unpatentable over Schollockopf in view of Higginson as applied to claims 1, 4, 7, 10-12, 14, and 16 above, and further in view of Remer (US Patent No. 3565039).” In support of the rejection, the Patent Office states the following:

Regarding claim 8, Schollockopf in view of Higginson do not teach a temperature-regulating facility arranged inside or outside the roller-shaped body of the dosing device. However, Remer discloses a web substrate coating facility (unit 20 and shell 22) arranged outside a system of rollers (26, 27, 24) that comprises a temperature-regulation coil (coil 32) (Remer: column 3, lines 36-70 and Fig. 1). Remer further teaches that temperature regulation of the region around the coating apparatus can facilitate various coating operations by, for example, evaporating a solvent vehicle which is absorbed by the web (Remer: column 3, lines 69-75 to column 4, lines 1-7). One of ordinary skill in the art, motivated by a need to deliver a dosed coating comprising a solvent vehicle to a web substrate would have found it obvious at the time of the invention to place the dosing device of Schollockopf in view of Higginson into the temperature-regulated facility of Remer, with the reasonable expectation that such a modification would allow for the rapid evaporation of the solvent.

Applicants respectfully traverse the subject rejection. Claim 8 depends from claim 1. Claim 1 is patentable over Schollkopf et al. in view of Higginson for at least the reasons given above. Remer fails to cure all of the deficiencies of Schollkopf et al. in view of Higginson with respect to

claim 1. Therefore, based at least on its dependency from claim 1, claim 8 is patentable over the present combination of Schollkopf et al., Higginson and Remer.

Accordingly, for at least the above reasons, the subject rejection should be withdrawn.

Claim 9 stands rejected under 35 U.S.C. 103(a) “as being unpatentable over Schollokopf in view of Higginson as applied to claims 1, 4, 7, 10-12, 14, and 16 above, and further in view of Feiertag (US Patent No. 3664561).” In support of the rejection, the Patent Office states the following:

Regarding claim 9, Schollokopf in view of Higginson does not explicitly teach the use of guide rollers upstream of the application roller. However, it was well-known in the art at the time of the invention, as exemplified by Feiertag, to use adjustable guide rollers upstream of a processing station to ensure that the substrate is properly aligned (Feiertag: column 1, lines 39-64). One of ordinary skill in the art at the time of the invention, needing to properly align the substrate prior to coating in the apparatus of Schollokopf in view of Higginson, would therefore have found it prima facie obvious to add guide rollers to the apparatus as is taught in Feiertag.

Applicants respectfully traverse the subject rejection. Claim 9 depends from claim 1. Claim 1 is patentable over Schollkopf et al. in view of Higginson for at least the reasons given above. Feiertag fails to cure all of the deficiencies of Schollkopf et al. in view of Higginson with respect to claim 1. Therefore, based at least on its dependency from claim 1, claim 9 is patentable over the present combination of Schollkopf et al., Higginson and Feiertag.

Accordingly, for at least the above reasons, the subject rejection should be withdrawn.

Claims 13 and 15 stand rejected under 35 U.S.C. 103(a) “as being unpatentable over Schollokopf in view of Higginson as applied to claims 1, 4, 7, 10-12, 14, and 16 above, and further

in view of Nordby (US Patent No. 6637330).” In support of the rejection, the Patent Office states the following:

Regarding claims 13 and 15, Schollockopf in view of Higginson teach the use of doctor blades (ribs c) (Higginson: column 1, lines 64-66 and Fig. 2), but do not teach the use of rapidly detachable doctor blades. However, the use of such clamps to hold doctor blades is known in the art, as exemplified by Nordby. Nordby discloses a dosing device with doctor blades (4) that can be detached by turning a lever (handle 35) that actuates an eccentric clamp (clamping rail 5, beam 3)(Nordby: column 10, lines 13-28, Fig. 13a-d). Nordby further teaches that said doctor blades wear down rapidly (Nordby: column 1, lines 41-55).

One of ordinary skill in the art, motivated by a need to maintain a sharp working surface on the doctor blades, would have found it obvious at the time of the invention to use lever-actuated eccentric clamps to affix doctor blades to the scrapers (5) of Schollockopf in view of Higginson, with the expected result that such a modification would allow for worn working surfaces to be replaced quickly.

Applicants respectfully traverse the subject rejection. Claims 13 and 15 depend from claim 1. Claim 1 is patentable over Schollkopf et al. in view of Higginson for at least the reasons given above. Nordby fails to cure all of the deficiencies of Schollkopf et al. in view of Higginson with respect to claim 1. Therefore, based at least on their respective dependencies from claim 1, claims 13 and 15 are patentable over the present combination of Schollkopf et al., Higginson and Nordby.


Accordingly, for at least the above reasons, the subject rejection should be withdrawn.

In conclusion, it is respectfully submitted that the present application is in condition for allowance. Prompt and favorable action is earnestly solicited.

If there are any fees due in connection with the filing of this paper that are not accounted for, the Examiner is authorized to charge the fees to our Deposit Account No. 11-1755. If a fee is required for an extension of time under 37 C.F.R. 1.136 that is not accounted for already, such an extension of time is requested and the fee should also be charged to our Deposit Account.


Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA D.C. 22313-1450 on June 10, 2010.


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